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Legal and Institutional Component
LTBP
Workshop Report

Legal And Institutional Arrangements For The Management Of Lake And River Basins: Issues To Be Covered In An Agreement And Possible Approaches

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Pollution Control and Other Measures to Protect Biodiversity in Lake Tanganyika (RAF/92/G32)

Lutte contre la pollution et autres mesures visant à protéger la biodiversité du Lac Tanganyika (RAF/92/G32)

Le Projet sur la diversité biologique du lac Tanganyika a été formulé pour aider les quatre Etats riverains (Burundi, Congo, Tanzanie et Zambie) à élaborer un système efficace et durable pour gérer et conserver la diversité biologique du lac Tanganyika dans un avenir prévisible. Il est financé par le GEF (Fonds pour l'environnement mondial) par le biais du Programme des Nations Unies pour le développement (PNUD)"	The Lake Tanganyika Biodiversity Project has been formulated to help the four riparian states (Burundi, Congo, Tanzania and Zambia) produce an effective and sustainable system for managing and conserving the biodiversity of Lake Tanganyika into the foreseeable future. It is funded by the Global Environmental Facility through the United Nations Development Programme.

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MRAG

Institute of Freshwater Ecology

Authors:

Mr Cormac Cullinan and Mr Stephen Hodgson, EnAct International under contract to MRAG Ltd.
MRAG, 47 Prince's Gate, London SW7 2QA

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1. INTRODUCTION

The establishment of a sustainable institutional framework for cooperation between the lacustrine states in the management of the Lake will be crucial to the success of the project. The aim of this paper is to provide background information and raise issues in order to facilitate discussion among the governments and reach agreement in principle on the form which such a framework should take and the elements to be included in an agreement between the four States. Examples are drawn from a range of other international agreements on integrated resource management and observations are made as to their success or failure with a view to building on past experience and developing a framework which will effectively implement the objectives of the project, not just on paper but also in practice.

2. RATIONALE BEHIND AN AGREEMENT

The need for action to control pollution and protect the biodiversity of Lake Tanganyika is already well recognised, as is the justification for an integrated and international approach. And at the global level, support can be found for such action in Agenda 21, particularly in Chapter 18 (Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources) and Chapter 8 (Integrating environment and development in decision-making).

Before engaging in a discussion of what should be included in an agreement drawn up by the four lacustrine states, it is necessary to take a step back and consider exactly what the states are seeking to achieve by it. While it is easy to agree that there should be an agreement to ensure the sustainable management of Lake Tanganyika it is much more difficult to specify exactly what this agreement should contain.

Before the process of drafting an agreement can begin, it will be important to have a consensus over the scope of any agreement, the type of issues which will need to be addressed and the type of institutions to be created. One of the fundamental issues to be decided prior to drafting an agreement is whether it will be restricted to establishing an institutional framework and procedural rules within which ongoing discussions on the management of the Lake can occur, or whether it will go further and establish substantive / binding principles which the parties agree are to guide the long-term management of the Lake and its basin. While it may be easier to reach agreement on a more restricted agreement, that may amount to little more than an agreement to continue talking and postpones the taking of decisions regarding principles to be applied in managing the Lake.

Since there is already a consensus between the countries on many of the basic principles which should be applied with regard to transboundary water courses and environmental protection (as evidenced by the various regional and international agreements to which the countries are party, discussed in Part III of the legal and institutional baseline study) it would seem preferable to record these principles in this agreement and where possible develop them to make them practicably applicable. For this reason, this paper includes examples of the type of mechanisms and principles which could be included.

The paper on international environmental law outlined the principal obligations under the relevant international instruments to which the four states are party. The following should also be noted:

i) The *Treaty Establishing the African Economic Community* adopted at Abuju on 3 June 1991 provides for the management of water resources, eg. Article 46(2) requires the parties to co-operate in “the development of river and lake basins”; Article 56 requires states to promote co-operation and exchange information on plans and management of, *inter alia*, exploitation and distribution of water resources; Article 61(c) requires the states to harmonise their policies on maritime and inter-state lake and river transport.

ii) The *Lagos Plan of Action* adopted under the auspices of the OAU in 1980 urged African states, in Paragraph 70(b), to create regional and sub-regional institutions for the inventorying and utilization of shared natural resources. Paragraph 82 urges African countries to strengthen existing sub-regional river and lake basin commissions; Paragraph 85 urges the governments to establish joint

river or lake basin organizations to promote inter-governmental co-operation in the development of shared water resources.

3. LESSONS TO BE LEARNED FROM OTHER INTERNATIONAL WATERCOURSE AGREEMENTS

3.1 Introduction

It is obvious that any agreement reached by the four countries will only contribute to the prevention of pollution and conservation of biodiversity of Lake Tanganyika to the extent that it is capable of being implemented. Unfortunately past experience shows that many international watercourse agreements have not been as successful as had been hoped. If an agreement for Lake Tanganyika is to be effective, and the mechanism which it creates sustainable, it will be important to learn from the experience of other similar agreements. From the limited information available on the success or otherwise of integrated water resource management regimes, it is evident that there are several reasons as to why some such regimes have failed.

3.1.1 Lack of funds

Effective strategies for integrated water resources management require funding to sustain them and the institutions which they create. A lack of funds has resulted in the failure of even the best planned stratgegies for international watercourse management. In formulating institutional mechanisms for the management of Lake Tanganyika, it will be essential to bear in mind the question of resources. Specifically it will be necessary to create institutions which are realistic and affordable and also to explore all possible sources of funding for this.

3.1.2 Poor governance and an irresponsible leadership

Commentators have observed that the management of public institutions, particularly drainage basin organizations, are littered with instances of poor governance, and that among the principal problems are:

a) over-politicization of institutions and their programmes;
b) tendency for proliferation of institutions leading to duplication and cost burdens;
c) mix-up of economic exigencies with political images;
d) over-centralization of institutions and stifling of public initiative;
e) the mismanagement, corruption and theft of funds; and
f) lack of accountability.

It will be important to bear in mind these factors and to avoid such problems at the outset.

3.1.3 Basic structural irregularities

These include lack of capacity and weak institutional arrangements, which are discussed below.

3.2 Building sustainable frameworks for basin management

Following on from these common failings, Okidi[1] identifies three measures as being of critical significance to the sustainable operation of integrated water resource management regimes:

[1] C. Okidi, International Law and Water Scarcity in Africa.

3.2.1 Financial support

Recognising that comprehensive and integrated basin management is very costly, the World Bank noted in 1996 that:

> "[financing the strategies for water resources management in Africa] will require commitment and innovative financing arrangements by governments, donors and society at large".[2]

3.2.2 Good governance

(See comments above).

3.2.3 Capacity building

A UNDP financed World Bank project aimed at evaluating the status of existing hydrologic data-collection systems of the SADC countries concluded that:

> "the overriding constraints are financial and managerial...no country has a service which is adequate as a basis for sustaining the many water developments which can be expected in the region in the coming decades....manpower is rarely sufficient to allow data-collection agencies to meet their obligations, with establishments being too small and manpower skills insufficient for the workload".[3]

Okidi notes that:

> "The management of drainage basins is a complex and sophisticated task. It requires both discipline and depth of knowledge. It also requires a critical mass of expertise, in order to manage in a positive and sustainable way...[in most African countries there is] either a total lack or woeful inadequacy of technically qualified people to negotiate treaties and eventually manage the drainage systems...inadequate capacity leads to the frequent situation of a lack of manpower to follow up with data collection and analysis as well as capacity to plan and execute projects, once an Agreement has been signed"[4].

Questions which need to be addressed include the following:

1) What lessons should be drawn from existing treaties to which your country is a party?

4. ELEMENTS TO BE INCLUDED IN AN AGREEMENT

4.1 Name of Agreement

The name should convey the nature and purpose of the agreement. For example: *The Lake Tanganyika Basin Agreement*, or more specifically: *The Convention for the Prevention of Pollution and Protection of Biodiversity of Lake Tanganyika*.

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2 Africa:s Water Resources: Challenges and Opportunities for Sustainable Development", World Bank, 1996.

3 World Bank/UNDP, Sub-Saharan Africa Hydrological Assessment, Southern African Coordination Conference (SADC) Countries, regional report (December 1990).

4 Okidi also quotes from the 1993 World Bank Policy Paper "Water Resources Management" : "In tandem with the promotion of comprehensive framework and with institutional and policy reforms, country policy analysts, planners, managers, and technicians will need to upgrade their skills. Accordingly, where water resources management issues are significant, the Bank will support the training needed to deal with...river basin management, flood and drought planning, environmental protection, project formulation and evaluation..." [p17]

4.2 Preamble

The preamble is the introduction to the agreement, generally setting out the background to and rationale for it. It is anticipated that reference would be made to the following points:

- international agreements on which it is based or by which it is influenced, eg. The Rio Declaration; the Convention on Biological Diversity; the Watercourses Convention;
- problems which have prompted the making of the agreement, eg. the pollution/ biodiversity problems affecting the Lake;
- recognition of the importance of the Lake and the need to protect it;
- the main objectives behind the agreement.

The Convention on Biological Diversity has a long preamble, beginning as follows:

> "*Conscious* of the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components....*Conscious also* of the importance of biological diversity for evolution and for maintaining life sustaining systems of the biosphere...*Affirming* that the conservation of biological diversity is a common concern of humankind...*Reaffirming* that States have sovereign rights over their own biological resources...*Reaffirming also* that States are responsible for conserving their biological diversity and for using their biological resources in a sustainable manner...*Concerned* that biological diversity is being significantly reduced by certain human activities..."

The SADC Protocol on Shared Watercourse Systems in the Southern African Development Community begins as follows:

> "*Bearing* in mind the Helsinki Rules on uses of the waters of International Rivers and the work of the International Law Commission on the non-navigational uses of international watercourses...*Recognising* the relevant provisions of Agenda 21 of the United Nations Conference on Environment and Development, the concepts of environmentally sound management, sustainable development and equitable utilisation of shared watercourse systems in the SADC region...*Considering* the existing and emerging socio-economic development programmes in the SADC region and their impact on the environment.."

The preamble of the 1994 Agreement between Kenya, Tanzania and Uganda on the Preparation of a Tripartite Environmental Management Programme for Lake Victoria ("the Lake Victoria Agreement") is also worth noting, as it touches upon specific areas of concern:

> *"...Aware* of the environmental importance of Lake Victoria and its significance to the sustainable development of the three riparian countries; *Concerned* that the present level of exploitation of the fisheries resources of Lake Victoria may be close to the limits of the sustainable yield of the lake fishery; *Further concerned* that increased agricultural and urban run-off, discharge of domestic and industrial waste into Lake Victoria adversely affects the ecological system of the Lake; *Recognizing* that the conversion of wetland areas around Lake Victoria for agricultural and/or other uses may have a detrimental effect on the lake ecosystem; *Noting* that significant changes have occurred as regards fish stocks within Lake Victoria with some of the indigenous species facing depletion; *Agreeing* that regional cooperation is an essential component of the environmental management of the Lake...*Recognizing* that poverty is both a cause and a consequence of environmental degradation and must therefore be addressed adequately in order to enhance equitable and sustainable development among riparian communities; *Recognizing* that participation of local communities, research scientists, the private sector and non-governmental organisations is crucial to sustainable management of Lake Victoria.....; *Recognizing* that integrated management of the various resources which constitute the lake environment, is essential;...."

4.3 Objective/Aim

The objective(s) of the agreement could be set out as Article 1, as they are in a number of recent environmental agreements, in order to focus attention on it from the outset.

An example of such an article is Article 1 of the Biodiversity Convention:

> "The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources..."

Sometimes the objectives are not set out in a separate "objectives" article, but in a statement of obligations, as in the 1992 Helsinki Convention:

> "The Parties shall take all appropriate measures to prevent, control and reduce any transboundary impact[5] ...in particular...to ensure that transboundary waters are used with the aim of ecologically sound and rational water management, conservation of water resources and environmental protection...in a reasonable and equitable way...to ensure conservation and ...restoration of ecosystems" (Article 2)

The aim of many treaties relating to international waters is to deal with the settlement of frontier questions and provide the machinery to resolve such conflicts. Many provide a framework within which the flow regime is controlled and water transferred to facilitate irrigation and generate hydroelectric power for development, eg. the Senegal Basin ("OMVS") Treaty; and they sometimes provide for the establishment and operation of a particular project like a series of dams, eg. the Treaty on the Development and Utilization of the Water Resources of the Komati River Basin (between Swaziland and South Africa). Pollution prevention is more a feature of European conventions.

As Okidi notes, African agreements on integrated basin management tend to be multi-purpose in character, as distinct from the common practice on North America and Europe where the predominant purpose is pollution control.

Questions which need to be addressed include the following:

1) Should the objective of the agreement be not only to reduce pollution and to protect biodiversity, but also to improve and restore ecosystems?

2) Should the agreement be multi-purpose in character or should it aim only to prevent pollution and protect biodiversity of the Lake?

4.4 Definitions

The following terms (among others) would probably need to be defined:

"Basin State"; "*Drainage basin"; "Watercourse system"; "Biological diversity"; "Sustainable use"; "Ecosystem"; "Environmental damage"; "Pollution"; "Point and non-point sources of water pollution"; "Transboundary impact"; "Adverse effect";*

There is no one global definition for these terms but examples of how these have been defined in other international agreements are shown in Box 1.

Regarding "pollution", most definitions of this term require "damage or detrimental effects" as an essential element of the term. This implies that only where there is damage does there exist pollution in the legal sense (negative definition). But it can also be defined in a positive way - in terms of quality standards - to

[5] "any significant adverse effect on the environment resulting from a change in the conditions of transboundary waters caused by a human activity, the physical origin of which is situated wholly or in part within an area under the jurisdiction of a party, within an area under the jurisdiction of another Party.."

mean discharge of specified substances, over certain levels, etc. and this can be more meaningful, as individual discharges may not per se cause any damage but the accumulative effect may lead to serious damage. As conditions of the receiving water vary, an effective definition of pollution must take into account the specific circumstances of the particular river/lake, and may refer to standards set at the regional level, for example through a special Commission. It should also be noted that the definition in the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic ("OSPAR") goes further than most by effectively incorporating both the precautionary approach and the ecosystem approach.

BOX 1
Definitions

"Pollution of the marine environment means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results *or is likely to result* in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities" (*1982 UN Convention on the Law of the Sea, Article 1*). [emphasis added].

"Pollution of an international watercourse means any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly ir indirectly from human conduct." (*1997 Convention on the Law of the Non-navigational Uses of International Watercourses, Article 21).*

"Pollution means the introduction by man, directly or indirectly, of substances or energy into the maritime area which results, *or is likely to result*, in hazards to human health, harm to living resources and marine *ecosystems*, damage to amenities or interference with other legitimate uses of the sea." (*1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, OSPAR, Article 1(d)*). [emphasis added]

"Point and non-point sources of pollution means the sources of pollutants and nutrients the input of which to waters is caused either by locally determined discharges (point sources) or by diffuse effects being wide spread over the catchment areas (non-point sources)" (*1992 Convention on Co-operation for the Protection and Sustainable Use of the Danube River, (Danube River Convention) Article 1(f*))

(BOX 1 contd.)

"Ecosystem" means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit." (*1992 Biological Diversity Convention, Article 2*).

"Biological diversity" means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems." (*1992 Biological Diversity Convention, Article 2*).

"Watercourse" means a system of surface waters and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus."

"International watercourse" means a watercourse, parts of which are situated in different States."

"Watercourse State" means a State Party to the present Convention in whose territory part of an international watercourse is situated..." (*1997 Convention on the Law of the Non-navigational Uses of International Watercourses, Article 2*).

"*Transboundary impac"t* means any significant adverse effect on the riverine environment resulting from a change in the conditions of waters caused by human activity and stretching out beyond an area under the jurisdiction of a Contracting Party. Such changes may affect life and property, safety of facilities, and the aquatic ecosystems concerned." (*1992 Danube River Convention, Article 1(c)*).

"Pollution damage means loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the costs of preventive measures and further loss or damage caused by preventive measures". (*1969 International Convention on Civil liability for Oil Pollution Damage, Article 1(6)*).

"Damage to the Antarctic environment or dependent or associated ecosystems means any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention" (*1988 Convention on the Regulation of Antarctic Mineral Resource Activities, Article 1(15)*).

"Adverse effect means one or more of, (a) impairment of the quality of the natural environment for any use that can be made of it, (b) injury or damage to property or to plant or animal life, (c) harm or material discomfort to any person, (d) an adverse effect on the health of any person, (e) impairment of the safety of any person, (f) rendering any property or plant or animal life unfit for human use, (g) loss of enjoyment of normal use of property, and (h) interference with the normal conduct of business ("conséquence préjudiciable")" *(Environmental Protection Act of Canada, Article 1*).

4.5 Scope*/* application of Agreement

When establishing the scope of the agreement, there are two aspects to consider: geographical scope and subject scope.

The 1992 Danube River Convention deals with these issues in Article 3 as follows:

> "(1) This Convention applies to the catchment area of the Danube River as defined under Article 1, paragraph (b);

(2) Subject to this Convention in particular shall be the following planned activities and ongoing measures as far as they cause or are likely to cause transboundary impacts:
(i) the discharge of waste waters, the input of nutrients and hazardous substances both from point and non-point sources, as well as heat discharge;
.....
(3) This Convention is applicable to issues of fishery and inland navigation as far as problems of water protection against pollution caused by these activities are concerned."

Questions which need to be addressed include the following:

1) Is the agreement to apply to the whole Lake basin, and thereby adopt a wide approach to the integrated management of the entire basin?[6]

2) Is the agreement to extend to other states whose activities may have an impact on the Lake but which do not border it (eg. Rwanda)?

3) What activities is the agreement to cover?

4.6 Guiding Principles

International agreements on environmental protection are increasingly incorporating principles into their agreements to guide the parties in implementing their obligations. As discussed in the paper on international environmental law the following principles were widely endorsed at the 1992 Rio Conference, continue to gain increasing international support, and are highly relevant to any international cooperation effort to protect Lake Tanganyika:

- the Precautionary Principle;
- the Polluter Pays Principle;
- the Principle of Pollution Prevention at Source; and
- Sustainable Development (although this could be described more as a concept than a principle)

These principles have been incorporated into agreements in different ways. Some agreements place an obligation on the parties to "apply" the principles, whereas others state that the parties must simply "be guided by" them in carrying out their obligations. An example of the former is the 1992 OSPAR Convention:

> "The Contracting Parties shall apply:
> (a) the precautionary principle, by virtue of which preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects;
> (b) the polluter pays principle, by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter." (Article 2(2)).

The principle of prevention of pollution at source is reflected in the 1992 Helsinki Convention:

> "Measures for the prevention, control and reduction of water pollution shall be taken, where possible, at source." (Article 2(3)).

Article 2 of that Convention then goes on to require that "the Parties shall be guided by the following principles:

> (a) The precautionary principle, by virtue of which action to avoid the potential transboundary impact of the release of hazardous substances shall not be postponed on the ground that scientific

[6] As Lammers argues, even where pollution obligations are placed only on a portion of a watercourse, states will need to control pollution of the wider drainage basin to achieve the desired result in the water area (Lammers, Pollution of International Watercourses, p110-113, Birnie and Boyle, p. 217).

research has not fully proved a causal link between those substances on the one hand, and the potential transboundary impacts on the other hand;
(b) The polluter-pays principle, by virtue of which costs of pollution prevention, control and reduction measures shall be borne by the polluter;
(c) Water resources shall be managed so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs." (Article 2(5)).

The 1994 Danube River Convention combines "Objectives and Principles of Co-operation" into one article:

"(1)The Contracting Parties shall strive at achieving the goals of a sustainable and equitable water management, including the conservation, improvement and the rational use of surface waters and ground water in the catchment area as far as possible.
.....
(4) The polluter pays principle and the Precautionary principle constitute a basis for all measures aiming at the protection of the Danube River and of the waters within its catchment area.
(5) Water management co-operation shall be oriented on sustainable water management, that means on the criteria of a stable, environmentally sound development, which are at the same time directed to:
- maintain the overall quality of life;
- maintain continuing access to natural resources;
- avoid lasting environmental damage and protect ecosystems;
- exercise the preventive approach." (Article 2).

The 1994 Agreement on the Protection of the River Meuse also sets out "Principles of Co-operation", in Article 3, and requires the parties to be "guided..in their action" by the precautionary principle, the principles of preventive action and containment and reduction of pollution at source, and the polluter pays principle. It recites a version of the precautionary principle very similar to the Helsinki Convention wording, except that is refers to "significant transboundary impact" rather than any transboundary impact. It describes the "principle of containment and reduction of pollution at source" as meaning that:

"the Contracting Parties shall strive to use the best available technology and the best environmental practices, under economically acceptable conditions, in order to reduce the discharge of dangerous substances from point, as well as diffuse, sources." (Article 3(2)).

Other principles from the 1992 Rio Declaration which could be incorporated into the agreement are set out in Box 2 below.

BOX 2
Selected Principles from the 1992 Rio Declaration

Principle 2: "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

Principle 4: "In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."

Principle 10: "Environmental issues are best handled with the participation of all concerned citizens at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities....and the opportunity to participate in decision-making processes...Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided."

Principle 14: "States should effectively co-operate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health."

Principle 19: "States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant transboundary environmental effect and shall consult with those States at an early stage and in good faith."

Principle 24: "Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict..."

Principle 25: "Peace, development and environmental protection are interdependent and indivisible."

4.7 Substantive Rules / Obligations

In order to achieve the objectives of the agreement, it will be necessary to include in the agreement substantive rules and obligations on the Parties to take certain actions and refrain from taking other actions. These rules and obligations will need to complement and support the measures set out in the Strategic Action Plan. They should also take into account the relevant rules and recommendations of the institutional body (discussed below and referred to as the "committee" for ease of reference).

However, it should be noted that an Action Plan alone is not enough and must be backed up by binding obligations. As Okidi notes in respect of the Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambesi River System, the action plan takes the form of a standard range of activities desirable for sound management without being expressions of obligations as such (paragraph 20 lists the main elements of the action plan as being environmental assessment, environmental management, environmental legislation and supporting measures). He points out that the items are just an articulation of broad measures expressed in a "woolly and anticipatory format", and the agreement is therefore largely a hortatory instrument which was subject to further work to extrapolate an agreement with binding obligations.

In drafting substantive rules in the agreement, consideration should be given to the following obligations:

A. *Obligation **not to pollute** the waters of the Lake.*

The content of an obligation not to pollute can vary. Some treaties oblige states "to endeavour" to maintain waters in an unpolluted condition, or to "study and examine" measures which might affect water conditions. Most oblige states to "take measures" necessary to prevent pollution or to "abstain from taking measures" likely to cause pollution...sometimes with a qualification that the efforts be "as practicable as possible".

In addition to such an obligation, it is useful (and in practice more effective) to actually specify what concrete measures are or are not to be taken to prevent or control pollution. Provision could be made for the elaboration, at international level, by the basin institution, of lists of substances whose discharge should be prohibited or restricted. The institution could also have responsibility for establishing water quality standards and objectives, and assisting the states in the formulation of effluent standards. Or, standard setting could remain at the national level, with the agreement imposing a duty on the states to enforce the national systems of discharge permits, establish effluent standards, introduce the polluter pays principle and possibly to promote a system of financial incentives for encouraging the reduction of wastewater discharges.

Pollution of the waters of the Lake has a wide range of sources, and these will all need to be addressed, including:

- point source pollution, ongoing (eg. industry);
- ongoing non-point source pollution (eg. agriculture);
- pollution from isolated incidents, such as oil spills;

The 1997 Watercourses Convention encourages states to agree upon "measures and methods to prevent, reduce and control pollution of an international watercourse, such as:

> (a) setting joint water quality objectives and criteria;
> (b) establishing techniques and practices to address pollution from point and non-point sources;
> (c) establishing lists of substances the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored." (Article 21(3))

Article 22 addresses a particular threat, which may also need specific measures in the treaty: the introduction of alien or new species:

> "Watercourse States shall take all measures necessary to prevent the introduction of species, alien or new, into an international watercourse which may have effects detrimental to the ecosystem of the watercourse resulting in significant harm to other watercourse States."

The 1992 OSPAR Convention addresses specific measures for the different sources of pollution separately in its Annexes, which are arranged as follows:

> Annex I: On the Prevention and Elimination of Pollution from Land-Based Sources.
> Annex II: On the Prevention and Elimination of Pollution by Dumping or Incineration.
> Annex III: On the Prevention and Elimination of Pollution from Offshore Sources.

For example, Annex I begins by stating that:

> "1. When adopting programmes and measures for the purpose of this Annex, the Contracting Parties shall require, either individually or jointly, the use of:
> - *best available techniques* for point sources
> - *best environmental practice* for point and diffuse sources
> including, where appropriate, clean technology.
> 2. When setting priorities and in assessing the nature and extent of the programmes and measures and their time scales, the Contracting Parties shall use the *criteria* given in Appendix 2." [emphasis added].

It then sets out the criteria for the definition of *Best Available Techniques* and *Best Environmental Practice,* (Appendix 1) and the *criteria* referred to in Article 2 (Appendix 2).

The 1994 Danube River Protection Convention also sets out definitions of these terms, almost identically to the OSPAR definitions. *Best Available Techniques* is defined in Annex I Part I, as follows:

> "1. The use of the best available techniques shall emphasize the use of non-waste technology, if available.
> 2. The term Abest available techniques" means the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste. In determining whether a set of processes, facilities and methods of operation constitute the best available techniques in general or individual cases, special consideration shall be given to:
> (a) comparable processes, facilities or methods of operation which have recently been successfully tried out;
> (b) technological advances and changes in scientific knowledge and understanding;
> (c) the economic feasibility of such techniques;
> (d) time limits for installation in both new and existing plants;
> (e) the nature and volume of the discharges and emissions concerned.
> 3. It therefore follows that what is "best available techniques" for a particular process will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding.
> 4. If the reduction of discharges and emissions resulting from the use of best available techniques does not lead to environmentally acceptable results, additional measures have to be applied.
> 5. The term "techniques" includes both the technology used and the way the installation is designed, built, maintained, operated and dismantled."

Best Environmental Practice is defined in Part 2 as follows:

> "1. Best environmental practice means the application of the most appropriate combination of sectoral environmental control strategies and measures.
> 2. In determining what combination of measures constitute best environmental practice, in general or individual cases, particular consideration should be given to:
> - the precautionary principle;
> - the environmental hazard of the product and its production, use and ultimate disposal (principle of responsibility);
> - the substitution by less polluting activities or substances and saving resources including energy (principle of minimising);
> - the scale of use;
> - the potential environmental benefit or penalty [disadvantage?] of substitute materials or activities;
> - advances and changes in scientific knowledge and understanding;
> - time limits for implementation;
> - social and economic implications.
> 3. It therefore follows that best environmental practice for a particular source of impacts will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding.
> 4. If the reduction of impacts resulting from the use of best environmental practice does not lead to environmentally acceptable results, additional measures have to be applied and best environmental practice redefined."

The pollution control measures (legal, administrative, economic, financial and technical) required by Article 3 of the 1992 Helsinki Convention include the following:

- prevention, control and reduction of emission of pollutants at source, eg. low-waste technology;
- point source pollution prevention through licensing of discharges, and monitoring and control;
- stricter requirements, even prohibition, where quality of receiving water or ecosystem so requires;
- municipal waste water treatment - at least biological treatment;

- reduction of nutrient inputs from industrial and municipal sources, by eg. the application of Best Available Technology;
- reduction of diffuse sources of pollutants, by eg. Best Environmental Practices (especially agricultural sources);
- contingency planning;
- additional specific measures to prevent ground water pollution;
- minimising the risk of accidental pollution.

Emission limits are to be set for point source discharges into surface water based on Best AvailableTechnology; and Water Quality Objectives and criteria are to be defined. Annexes I, II and III set out respectively the definition of Best Available Technology; Guidelines for developing Best Environmental Practices; and Guidelines for Water Quality Objectives and criteria.

It may be most effective to set standards for controlling pollution at the inter-state level, as did the parties to the 1976 Convention for the Protection of the Rhine against Chemical Pollution by adopting (in 1987 at the 8th Ministerial Conference) the Rhine Action Programme, which has since been described as >the most successful instrument in the history of the Rhine= (Nollkaemper). It aims to reduce pollution by 27 priority substances, and it has achieved its best results with point sources of pollution. Riparian states are to prescribe state of the art technology for the responsible industries >with a view to reducing drastically (by around 50%) the total quantity of discharges of priority substances between 1985 and 1995' (para 3.1.) By 1994 for about two thirds of the priority substances this target had been achieved. (Non-point sources, such as agricultural, are much harder to tackle and, in respect of these, the Ministerial Conference called on states to increase their efforts to apply best environmental practices and possibly market instruments).

Provision could also be made for the adoption of Protocols from time to time to supplement the agreed measures. The Protocols could prescribe agreed measures, procedures and standards to prevent, reduce and control pollution from particular sources and to promote the environmental management objectives.

It may be desirable to make provision for an obligation to compensate for damage resulting from pollution prohibited by the agreement. This may be in addition to a system of penalties or fines for polluting in breach of licences or consents, and it is dealt with in more detail in the section on Liability and Compensation below. It is worth noting that the 1994 draft Convention on the protection of the Aral Sea provides that any intentional violation within a basin state of water withdrawal limits, regimes and schedules, determined by the Interstate Water Management Co-ordination Commission (“ICWC”) or the executive bodies of the ICWC, causing damage or affecting the interest of other basin states, leads to a penalty and to liability for compensation. Such cases are heard by an arbitral court composed of three nationals of third states.

Questions to be addressed include the following:

1) What standard for controlling pollution is appropriate ? Is Best Available Techniques realistic?

2) Should pollution control standards (such as emission limits) be set at the national level or at the international level, ie. through the Commission?

3) What should be the consequences of a failure by a state to comply with the standards set?

B. Environmental Impact Assessment

Environmental impact assessment (EIA) is an important tool for preventing and controlling water pollution and protecting biodiversity. Agenda 21calls for “mandatory environmental impact assessment of all major water resource development projects potentially impairing water quality and aquatic ecosystems...” (Chapter 18, p.163).

States could be required to enact national legislation requiring EIA of all projects which may have an adverse effect on the quality of the Lake and its biodiversity. There are some useful precedents which could be followed, particularly the European Community Directive 85/337 on Environmental Impact Assessment (as recently amended) and the 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context.

The Biodiversity Convention, Article 14, requires that:

> "Each Contracting Party, as far as possible and as appropriate, shall:
> (a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures;
> (b) Introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse effects on biological diversity are duly taken into account;"

Questions to be addressed include the following :

1) To what broad category of activities should the obligation to carry out an EIA apply? Should it cover both private and public (government) projects? [7]

2) Screening: To which specific projects should the obligation to carry out an EIA apply?[8]

3) Should the obligation to carry out an EIA apply to strategic activities too, ie plans and policies at the government level?

4) Scoping: What information should the EIA contain?

5) What is the effect of the EIA on the decision whether or not to grant development consent for it?

6) What involvement should the public have in the decision-making process?

7) Should provision be made for monitoring the effects of the development on the environment after it is carried out?

C. Prior notification of planned measures

Another important tool for controlling pollution and protecting biodiversity of the Lake is to require the States to notify other States before implementing planned measures. A procedure for this is set out in the 1997 Watercourses Convention and was discussed in the paper on international environmental law. Basically, the state planning the measure must notify other states which may be affected by it, within a certain time, and enter into consultations with any state that objects to the measure. However, this procedure is weak in several respects including the lack of the following elements:

(i) an obligation to notify all watercourse states of planned measures (which could cause pollution/ harm the biodiversity of the Lake), rather than only those which the state planning the measure determines will be significantly adversely affected;
(ii) legal consequences attached to a failure to notify;
(iii) significant substantive standards as to the type of information to be submitted by the state planning the measure, despite the list of relevant factors in Article 6 which are to be taken into account in applying the principle of equitable use;
(iv) a requirement for an environmental impact assessment to be carried out - the duty is merely to provide information on any EIA which is carried out;
(v) an indicative list of the types of measures that would require consultation;

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[7] The EC Directive applies to "public and private projects which are likely to have significant effects on the environment" excluding projects serving national defence purposes.

[8] The EC Directive lists types of projects in two Annexes: for Annex 1 projects an EIA is mandatory, and for Annex II projects an EIA must be carried out if the member state considers that the project is likely to have "significant effects on the environment". The 1991 Convention requires parties to undertake an EIA "prior to a decision to authorise or undertake a proposed activity listed in Appendix 1 that is likely to cause a significant adverse transboundary impact."

(vi) a provision that the notified state loses its right to claim compensation if it fails to respond to a notification;
(vii) an obligation to redress all significant harm which is caused.

Such defects could, and should, be rectified in the Lake Tanganyika agreement to ensure that all the basin states are properly notified of any planned measures which could undermine the objectives of the agreement to prevent pollution and protect the biodiversity of the Lake.

The 1992 OSPAR Convention, Article 21, lays down a procedure for consultation in respect of transboundary pollution, as follows:

> "1. When pollution originating from a Contracting Party is likely to prejudice the interests of one or more of the other Contracting Parties to the Convention, the Contracting Parties concerned shall enter into consultation, at the request of any of them, with a view to negotiating a cooperation agreement.
> 2. At the request of any Contracting party concerned, the Commission shall consider the question and may make recommendations with a view to reaching a satisfactory solution.
> 3. An agreement referred to in paragraph 1 of this Article may, *inter alia*, define the areas to which it shall apply, the quality objectives to be achieved and the methods for achieving these objectives, including methods for the application of appropriate standards and the scientific and technical information to be collected.
> 4. The Contracting Parties signatory to such an agreement shall, through the medium of the Commission, inform the other Contracting Parties of its purport and of the progress made in putting it into effect."

In the context of Lake Tanganyika, such a procedure could be adapted to come into effect when the environmental quality of the Lake, rather than just the interests of the Parties, may be affected by an activity carried out by one of the four states. Also, it is evident from this procedure that the Commission can play an important role in facilitating agreement between the parties.

Questions to be addressed include the following:

1) What kinds of measures should require prior consultation?

2) Which states should be consulted and how?

3) What should be the consequence of a failure to notify?

4) Should there be a mechanism for preventing planned measures to go ahead pending resolution of the consultation procedure?

D. Conservation and management

The Biodiversity Convention requires Contracting Parties to:

(i) develop national strategies, plans or programmes for the conservation and sustainable use of biodiversity, or adapt for this purpose existing strategies, plans and programmes;
and integrate the conservation and sustainable use of biodiversity into relevant sectoral or cross-sectoral plans, programmes and policies (Article 6);
(ii) identify components of biological diversity important for its conservation and sustainable use, and activities which have or are likely to have significant adverse impacts on it, and monitor the components of biodiversity and the effects of activities on it (Article 7);
(iii) take appropriate measures for in-situ conservation of biodiversity (Article 8), including:
- establishing protected areas;
- promoting the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;
- rehabilitating and restoring degraded ecosystems and promoting the recovery of threatened species;

- regulating, managing or controlling the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts;
- preventing the introduction of, controlling and eradicating those alien species which threaten ecosystems, habitats or species;

and in doing so, "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices..."

(iv) take appropriate measures for ex-situ conservation to complement the in-situ measures (Article 9), including:
- establishing and maintaining facilities for *ex-situ* conservation of and research on plants, animals and micro-organisms, preferably in the country of origin of genetic resources; and
- adopting measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;

(v) adopt "economically and socially sound measures" that act as incentives for the conservation and sustainable use of components of biodiversity (Article 11).

E. Exchange of information

An essential component of any arrangement for managing a shared resource in an integrated way is co-operation between the parties, and an important forms of co-operation is the exchange of information.

Article 17 of the Biodiversity Convention requires the Contracting Parties to:

> "...facilitate the exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity...Such exchange of information shall include exchange of results of technical, scientific and socio-economic research, as well as information on training and surveying programmes, specialized knowledge, indigenous and traditional knowledge....."

Article 6 of the 1992 Helsinki Convention requires the Parties to:

> "...provide for the widest exchange of information, as early as possible, on issues covered by the provisions of this Convention."

Article 12 of the 1994 Danube River Protection Convention is more explicit in prescribing what information should be exchanged:

> "1. As determined by the International Commission the Contracting Parties shall exchange reasonably available data, *inter alia*, on:
> (a) the general conditions of the riverine environment within the catchment area of the Danube River;
> (b) experience gained in the application and operation of best available techniques and results of research and development;
> (c) emission and monitoring data;
> (d) measures taken and planned to be taken to prevent, control and reduce transboundary impact;
> (e) regulations for waste water discharges;
> (f) accidents involving substances hazardous to water.
> 2. In order to harmonize emission limits, the Contracting Parties shall undertake the exchange of information on their regulations.
> 3. If a Contracting Party is requested by any other Contracting Party to provide data or information that is not available, the former shall endeavour to comply with the request but may condition its compliance upon the payment, by the requesting Party, of reasonable charges for collection and, where appropriate, processing such data or information.
> 4. For the purposes of the implementation of this Convention, the Contracting Parties shall facilitate the exchange of best available techniques, particularly through the promotion of: the

commercial exchange of available techniques, direct industrial contacts and cooperation, including joint ventures; the exchange of information and experience; and the provision of technical assistance. The Contracting Parties shall also undertake joint training programmes and the organisation of relevant seminars and meetings.
5. The provisions of this Convention shall not affect the rights or the obligations of Contracting Parties in accordance with their domestic laws, regulations, administrative provisions or accepted legal practices and applicable international regulations to protect information related to personal data, intellectual property including industrial and commercial secrecy, or national security.
6. If a Party nevertheless decides to supply such protected information to another Party, the Party receiving such protected information shall respect the confidentiality of the information received and the conditions under which it is supplied, and shall only use that information for the purposes for which it was supplied."

Article 13 prescribes further rules on the protection of information supplied.

The Commission could be a practical vehicle for the exchange of information.

Questions to be addressed include the following:

1) What sort of information should the parties be required to exchange?

2) Should there be limits set on the sort of information that can be requested from a Party (eg. confidentiality)?

3) Should there be a duty on the Parties to respect the confidentiality of certain information and / or penalties for failing to do so?

4.8 Procedural Rules

- *Duties to Promote Local Participation*

Public participation in environmental decision-making is recognised in the 1992 Rio Declaration and Agenda 21 as a fundamental component of sustainable development. Principle 10 states that:

> "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities...and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided."

Among the objectives set out in Chapter 8 of Agenda 21 for integrating environment and development in decision-making, is:

> "to develop or improve mechanisms to facilitate the involvement of concerned individuals, groups and organisations in decision-making at all levels" (page 89, paragraph A.c).

Consideration should be given to how to achieve these objectives in the management of the Lake. The public could be involved in the processes for EIA and notification of planned measures, discussed above. They could also have access to information concerning and affecting the state of the Lake.

- *Public Information*

In order to promote public participation and transparency in the management of the Lake, and encourage the public to contribute to the management system, information concerning the state of the Lake should be made available to the public.

Questions to be addressed include the following:

1) What information should be made available to the public?

2) Upon what terms / conditions, if any, should the information be made available?

3) What exceptions, if any, should be made to the release of information (eg. confidentiality)?

The 1992 Helsinki Convention sets out the requirements for public information in Article 16:

> "1. The Riparian Parties shall ensure that information on the conditions of transboundary waters, measures taken or planned to be taken to prevent, control and reduce transboundary impact, and the effectiveness of those measures, is made available to the public. For this purpose, the Riparian Parties shall ensure that the following information is made available to the public:
> (a) Water-quality objectives;
> (b) Permits issued and the conditions required to be met;
> (c) Results of water and effluent sampling carried out for the purposes of monitoring and assessment, as well as results of checking compliance with the water-quality objectives and the permit conditions.
> 2. The Riparian Parties shall ensure that this information shall be available to the public at all reasonable times for inspection free of charge, and shall provide members of the public with reasonable facilities for obtaining from the Riparian Parties, on payment of reasonable charges, copies of such information."

The 1990 European Community Directive on the Freedom of Access to Information on the Environment (Directive 90/313/EEC) can also provide a useful precedent.

Other procedural matters to be considered are:

- *Reporting; and*
- *Filing of information with the Secretariat*.

4.9 Institutions

In order to manage the Lake in a sustainable and effective way, it is essential to establish an intergovernmental institutional structure, clearly define its powers and responsibilities, and ensure that it has the means to function effectively.

Caponera suggests a number of requirements for a successful basin administration.[9] These cover:

1) *Objectives and purposes*.

Should the administration be concerned only with pollution prevention and the protection of biodiversity, or also with wider issues of water usage? In any case, adequate powers must be conferred to enable it to achieve its objectives. These may include:

i) technical responsibilities, such as:
- collection and exchange of data;
- formulation and co-ordination of basin plans;
- control of certain beneficial uses of water (eg. domestic and community uses, agricultural uses, industrial uses, navigation, fishing...etc); control of certain harmful effects of water (eg. flood control measures, drought warning, prevention, reduction and control);
- water quality control, eg. prevention and abatement of water pollution resulting from certain beneficial uses or harmful effects, and measures to be taken separately or jointly by member states; environment protection, with reference to the waters of the basin,

[9] D. Caponera, p.238.

including minimum standards and measures to be taken separately or jointly by member states;

(ii) economic and financial responsibilities, such as:
- internal financing of the administration, including cost sharing and sharing criteria;
- financing of particular projects and works, including constitution and management of joint international funds; cost sharing and criteria for sharing; criteria and procedures for compensation; sharing of benefits;
- external financing, with particular reference to powers to enable the institution to enter into agreements for this purpose;

(iii) legal and administrative responsibilities, such as:
- prevention and settlement of disputes;
- drafting and implementation of required legislation (international agreements, ministerial resolutions, parallel or harmonised legislation);

(iv) options as to which functions and responsibilities must be attributed to:
- an existing basin administration;
- a new basin authority or administration;
- one or more specialised management institutions (eg. Navigation, electricity,..)
- national administrations;
- other regional or basin administrations or institutions.

2) *Duration*

The administration may be set up on a permanent or an *ad-hoc* basis. Permanent administrations work on a continuing basis with a permanent secretariat, eg. the Danube Commission in Europe, the Senegal Basin Authority (OMVS) in Africa, and the Mekong Commission in Asia. *Ad-hoc* commissions, on the other hand, only meet occasionally, either on a pre-established schedule or whenever called by one of the parties.

3) *Constitution*

The constitution of the administration may take various forms, and the options include the following:

- a single basin institution vested with supranational decision-making powers, eg. the Senegal Basin Authority, the Kagera Basin Authority, and the Lake Chad Basin Commission;
- separate national commissions or agencies, eg. the USA-Canada Boundary Commission;
- a joint commission or institution composed of national representatives;
- a mixed commission or agency (most common), eg. the USA-Mexico Boundary Commission;
- a joint commission or institution composed of national representatives, where such national representatives are an agency, eg. the Mekong Committee where the representative of Thailand is the National Energy Administration.

The organisation is usually composed of several separate organs, often a permanent (joint) Commission, a Secretariat, and an Executive Council of Ministers. The composition of each of these, as well as their office and meeting arrangements, are usually described in the agreement establishing them. For example:

> - the Commission shall be composed of X number of representatives, X number from each country; the Commission shall meet in ordinary sessions X number of times a year; the meetings shall be held in rotation in capitals of the member states unless the Commission decides otherwise; extraordinary sessions may be convened at any moment upon request of at least X number of representatives; sessions of the Commission will be prepared and convened by the X (usually the Executive Secretary); sessions to be presided over by X, and X is to act as Chairman; the Commission shall have is headquarters at X and regional offices at X....

In the context of Lake Tanganyika, the institution should have powers to set up sub-Committees to deal with issues in a particular areas, such as fisheries, vessel-source pollution, etc. An example of such powers can be seen in Article III of the 1992 Draft Convention on the Establishment of the Lake Victoria Fisheries Commission, which provides that the Commission is to be assisted in the performance of its functions by a

Fisheries Management Committee and a Scientific Committee, and that the Commission may establish such other Committees as it may determine to be appropriate.

4. *Procedures for Decision-making*

It may be necessary to have a quorum, for the validity of the meetings, which might depend on the importance of the decisions to be taken, eg USA-Canada Basin Commission. Decisions may be taken by unanimity, or a simple qualified majority, or any other combined from of decision-making. The most common form is unanimity.

5. *Legal status*

Consideration should be given to the legal status of the administration vis-a-vis both its member states and other states which are not members of the administration, and vis-a-vis international and other organisations. It might cover the managing body, the staff, the assets, equipment and other properties, and the whole administration as such (eg power to sue and be sued). Usually, the institutions recognise diplomatic protection and immunities to the institution itself and to its staff (in varying degrees) in order to allow the staff to operate in a way which protects their independence and personal security. (For an example, see the Kagera Basin Organisation Agreement, Chapter V, Articles 16 and 17.)

6. *Territorial competence*

The territorial competence of the administration, i.e. the area over which it has power to exercise its jurisdiction or activities, should be defined in the instrument establishing the institution. It may include:

- the whole drainage basin (including surface waters, underground waters, or both);
- more than one drainage basin (multi-basin);
- part of a drainage basin (sub-basin), eg. the Mekong Committee=s jurisdiction extends only to the lower Mekong basin, which includes Laos, Cambodia, Thailand and Vietnam, but excludes the upstream riparians, Myanmar and China;
- a conventional area, i.e. an area otherwise defined and clearly delimited, eg. the Lake Chad Basin Commission is responsible for a >conventional= Chad Basin composed of Chad, Cameroon, Niger, Nigeria, excluding Algeria, Libya and the Sudan, even though they contribute waters to the same basin;
- boundary waters, eg. boundary river commissions, usually responsible for all water questions along the boundaries of two countries.

7. *Functions and Powers*

Regarding the allocation of functions and powers to the administration, questions need to be addressed, such as:

1) What kind of co-operation is envisaged?

2) What degree of involvement in the institution is required?

3) What specific fields is the administration to cover?

Some of the powers which might be included are:

i) advisory, consultative or co-ordinating functions, eg. the Mekong Committee and Plata River Basin Commission have only advisory powers, and their decisions need subsequent ratification by the governments to become binding on the states;
ii) executive, or operational functions, such as carrying out studies, investigations and surveys, eg. the Senegal Basin Authority and the Lake Chad Basin Commission;
iii) regulatory functions, eg. the implementation of decisions, and law making, eg. the Danube Commission has power to regulate the navigation of the Danube river; and the Rhine Commission

has power to monitor pollution in the waters of the Rhine. Decisions in these matters may take effect directly or only after acceptance by member states.

iv) judicial functions, eg. arbitration or final dispute settlement.

8. *Form*

The form of the institution may vary with regard to the degree of government participation or involvement, so it may be:

- national - fully governmental;
- interstate - multi-national and fully inter-governmental corporations or agencies composed only of basin states (generally those responsible for overall policy formulation and implementation); or
- mixed - multi-national corporations or agencies, including third parties and/or private sector (generally created for the purpose of operating a particular economic activity, such as a multi-national hydropower company, eg. the Cabora Bassa on the Zambesi Basin, operated by agreement between Mozambique and Portugal with the participation of a private company.)

9. *Major institutional requirements*

There are two sorts of institutions concerned with the development of water resources: regulatory institutions and development institutions. For the purposes of the Lake Tanganyika agreement, we are more concerned with regulatory institutions, the objectives of which may include:

i) establishment of technical co-operation for the formulation of common policies and for the co-ordinated (either joint or separate) planning for the rational management of the shared basin waters;
ii) co-ordination of studies and schemes prepared by member states which may affect the quality of the waters of the basin;
iii) centralization and exchange of hydrologic and related data;
iv) determination of respective rights and duties of member states re: conservation, development and utilization of basin water resources;
v) prior submission for examination and approval of proposed activities, schemes or plans which would modify quantity or quality of the waters, or unfavourably affect another basin state's water resources, etc.
vi) prevention and settlement of conflicts concerning the use and equitable sharing of waters;
vii) monitoring and control of activities of basin states and reporting following discussion of such activities.

As regards development institutions, responsible for the actual development of certain areas or the utilization of basin waters, these should be separate from regulatory institutions and their respective functions and powers should be clearly defined to avoid conflict. Activities or schemes of the development institution which might modify the quality of the basin waters, etc, should be submitted to the regulatory institution beforehand for study, modification and approval.

10. *Economic and financial requirements*

The instrument establishing the institution should provide for its internal financing, including cost sharing and the criteria for sharing. Treaties or other regulatory provisions should govern its capital formation, and distinguish between (i) internal resources (contributions of each basin state) and external resources (grants and loans coming from outside). It could also specify the apportionment of financial liabilities among basin states, and the constitution and management of joint international funds, etc. Regarding external financing, the institution should (i) have the necessary powers to negotiate or receive grants and loans, (ii) have a legal personality and financial autonomy, the capability to sue and be sued, and be in a position to provide donors or creditors with any required financial guarantees. The institution could adopt the principle of joint and several guarantees, whereby if one basin state defects, the others are jointly responsible for the repayment (eg. the Senegal Basin Authority).

Under the 1980 Niger Basin Authority Convention the parties adopted a Protocol Relating to a Development Fund. The main source of funds is the contribution of members, supplemented by external resources obtained in the form of gifts, grants and trust funds.

A good example of a typical arrangement for financing meetings is Article 4 of the 1992 Treaty between Swaziland and South Africa on the Establishment and Functioning of the Joint Water Commission: the parties are to be responsible for costs to their own delegation of attending meetings; the party hosting the meeting is to be responsible for the costs of the venue, administration, etc.; and all other costs are to be shared equally between the parties.

11. *Prevention and settlement of disputes*

International institutions can play an important role in the settlement of disputes between the parties, and this is addressed in more detail in section 10 below.

12. *Examples of Institutions*

There is no 'ideal' type of institution - it depends inter alia on the functions and activities to be performed and the political will to co-operate. However, it is useful to look at some examples of institutional arrangements in other agreements for the management of shared water resources, and these are given in Annex 1.

From the examples in Annex 1, and from Caponera's observations[10], some preliminary conclusions may be drawn as to the features of international water management institutions which tend to facilitate their success:

- *size*: it may be easier to achieve progress in a small institution;
- *effective participation* in the administrative institution by all states sharing the waters: optimum cooperation can only be achieved in this way;[11]
- *independence*: it is interesting to note the Helmand River Commission, set up under the 1950 Agreement for the Helmand delta between Afghanistan and Iran, is composed of three engineers coming from states without any vested interest in the area, with powers of recommendation only;
- *specialised manpower and financial means*: the availability of these factors could make the African Commissions, in particular, more effective;
- *peace*: the Mekong Commission, for example, has been prevented by war from exercising its activities fully;
- *flexibility*: this has helped the Mekong Commission to perform a large part of its functions, despite war;
- *consistency and harmony* between institutions whose activities affect each other: duplication of responsibility and confusion is caused when the powers of institutions are inconsistent with each other, eg. policy-making, co-ordinating and legislative functions are vested in two different institutions over the same basin, rather than making them organs of one organisation with co-ordinated functions;[12]
- *equal representation of staff* to prevent possible conflicts, and the introduction of *international legal status* for the institutions and their personnel;
- *political will:* states must be willing to be bound by their agreements.

4.10 Dispute Resolution

A detailed discussion of this issue was conducted in the paper on conflict resolution, but for the purposes of drafting an agreement, it is necessary to put the principles of international conflict resolution, which were discussed in that paper, into practice. The focus of this section will be mechanisms to resolve disputes arising over the interpretation or application of the agreement. However, conflicts can arise at all levels, and an important question to consider in this context is whether or not it is also desirable (and practical) to

[10] D. Caponera, p.236.

[11] However, states sharing water resources are under no general legal obligation to participate in an international water management institution. The Nile Joint Commission , for example, comprises only two (Egypt and the Sudan) of the eight riparian states, while on the same basin four states (Rwanda, Burundi, Tanzania and Uganda) have set up the Kagera Basin Organisation on the sources of the White Nile before it enters Lake Victoria. The Mekong Committee includes only four out of the six basin states - the People=s Republic of China and Myanmar are not members of the Committee.

[12] For example, see M. Nanni=s criticisms of the Aral Sea Basin institutions in RECIEL Vol 5 No2.

establish a mechanism for resolving conflicts over the Lake and its resources which arise at the local, regional or national levels (eg. between fishermen and shipping, between government departments, etc.).

As we have seen, there are various ways to resolve disputes arising between states over the interpretation of an agreement between them, ranging from collaborative, consensus-based techniques at one end of the spectrum to arbitration by a court or tribunal, such as the International Court of Justice, at the other. In general, arbitration can be time-consuming and costly (for example the final award in the Trail Smelter arbitration between Canada and USA was made on 11 March 1941, six years after the Convention on the Settlement of Disputes had been signed) so it is more desirable for the basin states to have a mechanism for dispute settlement between themselves, with a resort to arbitration only where agreement is not reached.

Most recent international environmental / natural resources agreements follow a similar pattern in prescribing methods of dispute resolution, which can be generally summarised in order of priority as follows:

i. amicable settlement through direct negotiation between the parties;
ii. referral to the institutional body (eg. basin commission) and/or governments of the parties for settlement through diplomatic means;
iii. referral to arbitration in accordance with a set procedure, or the International Court of Justice, for a binding decision.

The following **questions** should be addressed when establishing a dispute resolution procedure:

1) Should the parties have a choice of methods when signing the agreement?

2) How long after failure to settle a dispute amicably should the parties be obliged to refer the dispute to the commission or to binding arbitration?

3) Should submission of a dispute to binding arbitration be subject to the consent of both parties or could it be unilateral?

4) Should the Commission of Mediation, Conciliation, and Arbitration of the Organisation of African Unity play any role in the settlement of disputes?

If an arbitration procedure is established under the agreement, the following **questions** should also be addressed:

1) How is the arbitral tribunal constituted? (eg. each party appoints X members, within X days, and in the absence of agreement X shall make the necessary appointments).
(There are usually three members, one appointed by each party and third, a chairman, to be designated by the two appointed members; for the sake of impartiality, the chairman is usually not allowed to be a national of one of the parties to the dispute or, in OSPAR, to be employed by any of them, or to have dealt with the case in any other capacity).

2) What information is to be transmitted to all the parties?
(Usually, the applicant must inform the Commission that it has requested the setting up of a tribunal, and the Commission is to inform all the parties).

3) How are the decisions of the tribunal (both on procedure and on substance) to be taken, eg. by majority vote or unanimity?

4) Should the tribunal have power (at the request of one of the parties) to recommend essential interim measures of protection, pending a decision?

5) What are the applicable rules to guide the tribunal in reaching a decision?
Can it establish its own (internal) rules of procedure?

6) Within what period of time must the tribunal make a decision?

7) How are the expenses of the tribunal (including remuneration of its members) to be paid? (Usually these are shared equally between the parties.)

8) Who is to provide all the facilities necessary for the effective conduct of the proceedings? (Usually the parties).

9) Should there be powers for the tribunal to establish facts, and a duty on the parties to submit information?

10) What is the effect of the absence of a party to the dispute at the hearing? (Usually, it shall not constitute an impediment to the proceedings).

11) Should there be rights for other interested parties to intervene in the proceedings with consent of tribunal? If so, should the award become binding on them too? (In the 1992 OSPAR Convention, "any Contracting Party that has an interest of a legal nature in the subject matter of the dispute which may be affected by the decision in the case" may intervene).

12) Should the award of the tribunal be:

a) accompanied by a statement of reasons?
b) final and binding upon the parties?
c) circulated via the Commission to all the parties?
d) not subject to appeal?

(The answer to these four questions is usually yes).

A good example of a relatively straightforward arbitration procedure is set out in the 1992 *Treaty on the Development and Utilization of the Water Resources of the Komati River Basin* (Swaziland and South Africa):

> "3. Arbitration shall be by a tribunal composed of an arbitrator appointed by one Party, an arbitrator appointed by the other Party and an arbitrator appointed jointly by the two arbitrators, who shall be chairman.
> 4. If after a period of three months from the delivery to a Party of the notice referred to in sub-article 2 [notice of intention to submit dispute to arbitration], either Party has failed to appoint its arbitrator to the arbitral tribunal or the arbitrators concerned have failed to agree on the arbitrator to be appointed by them, either Party may request the Secretary General of the United Nations to appoint such arbitrator or arbitrators.
> 5. The arbitral tribunal shall adopt its own rules of procedure.
> 6. The decision of a majority of the arbitrators of the arbitral tribunal shall be final and binding on the Parties.
> 7. Each Party shall be responsible for the remuneration of the arbitrator appointed by or for it and for all other costs connected with such appointment and all costs incurred in the preparation and presentation of its case to the arbitral tribunal. All other costs incurred in connection with the arbitration proceedings shall be shared equally between the Parties."

Some extracts of provisions on dispute settlement from various watercourse agreements are set out in Annex 2.

Where a dispute arises over failure of a party to comply with its obligations under the agreement, it may be more constructive to seek ways to help it to achieve compliance, rather than just arbitrate that it comply. In this context, it is worth examining the Non-Compliance Procedure which was adopted in 1992 by the parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (adopted under the 1985 Vienna Convention on the Protection of the Ozone Layer). This is discussed in more detail in the paper on conflict resolution.

4.11 Liability and Compensation

The Biodiversity Convention, Article 14(2) requires that:

> "he Conference of the Parties shall examine, on the basis of studies to be carried out, the issue of liability and redress, including restoration and compensation, for damage to biological diversity, except where such liability is a purely internal matter."

Liability for oil pollution is well established at the international level. The 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC) and the 1971 International Convention for the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention) provide an effective mechanism for compensating the victims of oil pollution damage. The law on liability for environmental damage caused by other activities is less well developed at the international level, as discussed in the paper on international environmental law and the law of transboundary watercourses.

Questions to be addressed include the following:

1) What activities and impacts on the Lake should be made subject to liability for harm?

2) Who should be liable, and for what?

3) Should there be a limit in liability and/ or defences available?

4) Who should have standing to bring a claim, and how?

4.12 Other Provisions

There are a number of other provisions which will need to be considered for possible inclusion in the agreement to enable it to work effectively, such as:

- procedures for the adoption and amendment of protocols, Annexes, etc.
- accession by other states (eg. Rwanda);
- signature, ratification, withdrawal, etc;
- entry into force;
- depository functions;

ANNEX 1 INSTITUTIONAL ARRANGMENTS

USA and Canada

The **International Joint Commission**, set up by the 1909 Boundary Waters Treaty between Britain and USA, has been described as "ne of the most efficient instruments of international co-operation in the field of shared water resources"(D. Caponera, p.232.) Reasons for this may include:

- its high technical level;
- its impartiality;
- its procedures and mechanisms; and /or
- political climate between the two states.

The Commission is composed of six members, three for each side, meeting twice a year alternately in Washington and Ottawa. Decisions may be taken by majority vote, but have so far been taken unanimously. In the case of parity of vote, the question will be submitted to the governments. The Commission must give its consent when a new project of utilisation can alter the natural level or the flow of the water. The Commission must also undertake studies and enquiries and present recommendations when required by either state. These powers of enquiry are often undertaken by special auxiliary commissions which are set up according to need. The two states have often used these auxiliary commissions for the supervision of specific projects and for verifying compliance with pre-established standards. The Commission has also played an important role in the elaboration of agreements for the exploitation of the St Lawrence and Columbia rivers. The Commission is now entrusted with arbitration functions to resolve disputes between the parties.

Africa

The basin commissions established in Africa after 1964 have been described as "rom a purely legal and institutional point of view...probably the most advanced in the world."(Caponera, p.243). They include: the **Senegal Basin Authority** (OMVS); the **Kagera Basin Authority**; the **Lake Chad Basin Commission** and the **Niger Basin Authority**[13]. The purpose of the African Commissions is, *inter alia*, to facilitate co-operative arrangements among the basin countries; to avoid inter-state water conflicts; and to facilitate international financing. The strength of these Commissions lies in their constitutional and decision-making powers. Each one is composed of:

i) a *Conference of the Heads of States and Governments*, with full powers to take major strategic and policy decisions, ordinarily meeting every two years (and extraordinarily as necessary) and taking decisions by unanimity, which are binding on member states;
ii) a *Council of Ministers* of the basin states, which ordinarily meets annually, and whose decisions must be unanimous and are binding on the member states; any matter on which a decision has not been agreed upon is referred to the Conference of the Heads of States;
iii) an *Executive Secretariat* which proposes and services the meetings and prepares the documents to be discussed by intergovernmental technical committees of experts before submission to the Council of Ministers.

The Niger Basin Authority, as well as having a Summit of Heads of State and Government, a Council of Ministers and an Executive Secretariat, also has a *Technical Committee of Experts,* which is responsible for preparing all meetings of the Council of Ministers and submitting reports and recommendations to the Council of Ministers.

The functions of the Chad Basin Commission and the River Niger Commission include: a) to prepare general regulations, and ensure their effective application; b) to collect, evaluate and disseminate information on proposals made by member states, and to recommend plans for common projects and joint

[13] For a good example of a agreement providing for the establishment and functioning of a joint water commission, see also the 1992 Treaty between Swaziland and South Africa on the Establishment and Functioning of the Joint Water Commission.

research programmes; c) to maintain liaison between the member states; d) to follow the progress of the execution of surveys and works, and to keep member states informed of these through periodic reports submitted to them by the states; e) to draw up common rules regarding navigation and transport; f) to examine complaints and promote the settlement of disputes and the resolution of differences; and g) generally to supervise the implementation of their statutes and conventions.

Problems encountered by the African Commissions in achieving their aims have included:

- political differences between co-basin states;
- different degrees of development;
- inadequate availability of financial and manpower resources.

The **1994 Lake Victoria Tripartite Agreement** contains good organisational arrangements to facilitate the implementation of a five year programme to strengthen regional co-ordination in the management of Lake Victoria resources. The parties agree to establish a *Regional Policy and Steering Committee*, to be assisted by a *Regional Secretariat*, and two *Regional Task Forces*. Regional Task Force 1 is to address fisheries management and control of water hyacinth and other invasive weeds, and Regional Task Force 2 is to address management of water quality and land use, including wetlands. The Regional Task Forces are to be composed of members from national working groups established by the parties, and are to be assisted in the performance of their functions by experts who must include at least certain types of expertise. Each party must also establish two *National Working Groups* and a *National Secretariat* to prepare national proposals for incorporation into regional programme components. The membership of these Working Groups is to include administrative and scientific personnel, academic institutions, private sector parties and local NGOs, “ith a special effort to be made to incorporate local riparian community interests”(Article 2(4)(a)). Each of the parties is assigned “ead responsibilities”for one particular organ, eg. Tanzania is responsible for the Regional Secretariat serving the Regional Policy and Steering Committee.

Asia

The **Mekong Committee** (the Committee for Coordination of Investigations of the Lower Mekong Basin) established under the aegis of the United Nations to promote joint co-operation between Cambodia, Laos, Thailand and Vietnam, has continued to operate in spite of political differences and even a state of war. The reasons for its ability to do so include:

- a strong desire to co-operate, the so-called >Mekong spirit=;
- the continued support of the United Nations, through the provision of an umbrella and institutional-financial support to the organisation (its Executive Agent is an official of the UNDP).

However, when Thailand transferred Mekong waters into the Chao Phya Basin without obtaining approval from the original Committee and Vietnam and Laos objected to the transfer, there was a serious problem: the statute of the Mekong Committee did not vest the Committee with approval functions, its role was limited to the preparation of studies. In 1995 a new Mekong River Commission was set up under the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, to take over from the original Committee. It consists of a Council, a Joint Committee, and a Secretariat. The new Mekong Commission will be vested with powers to approve, under certain circumstances, water diversions, and therefore better empowered to address such conflicts in future.

The *Council* is composed of one member from each participating riparian state at the Ministerial and cabinet level (who is empowered to make policy decisions on behalf of their government). It convenes one regular session every year and may convene special sessions at the request of any member state, and it may invite observers. Its functions are, broadly: a) to make policies and decisions and provide other necessary guidance; b) to decide any other policy making matters and make decisions necessary to successfully implement the Agreement; and c) to entertain, address and resolve issues, differences and disputes referred to it. Decisions are taken by unanimous vote.

The *Joint Committee* is composed of one member from each participating riparian state, at no less than Head of Department level. It must convene at least two regular sessions every year and may convene special sessions whenever it deems necessary at the request of a member state, and it may invite

observers. Its functions are broadly: a) to implement the policies and decisions of the Council, and such other tasks as the Council may assign to it; b) to formulate a basin development plan, and submit it (and joint development projects/ programmes) to the Council for approval; c) to confer with donors to obtain financial and technical support; d) to regularly obtain, update and exchange information and data; e) to conduct appropriate studies and assessments for the protection of the environment and the maintenance of the ecological balance of the basin; and f) to assign tasks and supervise activities of the Secretariat. Decisions are taken by unanimous vote.

The *Secretariat* is to render technical and administrative services to the Council and Joint Committee, and is under the direction of Chief Executive Officer, appointed by the Council. Its functions include: a) to carry out decisions and tasks assigned to it by the Council and Joint Committee; b) to provide technical services and financial administration and advice as requested by them; c) to formulate the annual work programme, and prepare all other plans, projects and programme documents, studies and assessments as may be required; d) to maintain databases of information.

Europe

The **International Commission for the Protection of the Meuse against Pollution** (set up under the 1994 Agreement on the Protection of the River Meuse) has only advisory and recommendatory powers and can adopt decisions only in the presence of all the delegations of the contracting parties and with their unanimous approval. The Commission meets once a year and more often at the request of at least two delegations. It can establish working groups to assist it in the performance of its tasks.

The tasks of the Commission include: a) to prepare objectives and a programme of action for implementation by each of the parties; b) to carry out, at regular intervals, co-ordinated evaluations of the efficacy of the action programme; c) to define, collect and evaluate data provided by the parties relating to their territories, in order to identify the sources of pollution which have a significant impact on the quality of the Meuse; d) to draw up inventories of and promote the exchange of information on these sources of pollution; e) to co-ordinate the monitoring programmes of the contracting parties concerning water quality with a view to establishing a homogenous monitoring network; f) to serve as a forum for the exchange of information on the parties= water management policies, and on projects subject to impact assessment and which have a significant transboundary impact on the quality of the Meuse; and g) to issue advisory opinions and recommendations to the parties regarding co-operation under the Agreement. However, there is scope for further development of the Commission=s tasks, as it must also consider all other issues within the area of application of the agreement which the contracting parties assign to it by mutual consent. (Article 5).

The Commission must admit as observers, upon request, any state which is not a party to the Agreement and a part of whose territory lies in the river basin of the Meuse, and the European Community. Also, the Commission may admit as observers any intergovernmental organisation or commission whose preoccupations are similar to its own. Observers may participate in the meetings of the Commission but have no voting rights.

ANNEX 2 PROVISIONS ON DISPUTE SETTELEMENT IN INTERNATIONAL WATERCOURSE AGREEMENTS

Africa

1963 ***Act regarding navigation and economic co-operation between the states of the Niger Basin:***

> "any dispute...shall be amicably settled by direct agreement between them [the riparian states] or through the Inter-Governmental Organisation...Failing such settlement, the dispute shall be decided by arbitration, in particular by the Commission of Mediation, Conciliation and Arbitration of the Organisation of African Unity, or by judicial settlement by the International Court of Justice." (Article 7)

1964 ***Agreement concerning the Niger River Commission and the Navigation and Transport on the River Niger:***

> The functions of the River Niger Commission are to include: "to examine complaints and to promote the settlement of disputes and the resolution of differences." (Chapter 1, Article 2(g))

1980 ***Convention creating the Niger Basin Authority:***

> "Any dispute...shall be amicably settled through direct negotiation. In the event of failure to settle such disputes, the matter shall be referred to the Summit [of Heads of State and Government] by a party to such disputes and the decision on the same shall be final." (Chapter V, Article 15)

1964 ***Convention and Statute relating to the Development of the Chad Basin*****:**

> The Chad Basin Commission=s functions include: "to examine complaints and to promote the settlement of disputes and the resolution of differences." (Article 9).

1972 ***Agreement establishing the Lake Chad Basin Commission Development Fund*****:**

> "Any dispute...which cannot be resolved by the Commission, shall be referred by any of the contracting parties to the Commission of Mediation, Conciliation and Arbitration of the [OAU] for determination." (Article 8).

Draft Convention on the Establishment of the Lake Victoria Fisheries Commission:

> "Any dispute...which cannot be settled by negotiation, conciliation, or similar means may be submitted to arbitration at the request of any two members of the Commission. The parties to the dispute shall appoint one arbitrator each. The two arbitrators so appointed shall designate by mutual agreement the third arbitrator, who shall be the President of the Tribunal. If one of the parties to the dispute does not appoint an arbitrator within two months of the appointment of the first arbitrator, or of the President of the Tribunal has not been appointed within two months of the appointment of the second arbitrator, the Chairman of the Commission shall appoint the second arbitrator, or the President...as the case may be." (Article IX)

1992 ***Treaty on the Development and Utilization of the Water Resources of the Komati River Basin (Swaziland and South Africa):***

> "1. Any dispute..shall at the request of either Party be resolved through negotiations between the Parties. 2. In the event of the Parties failing to settle a dispute within three months from the date of a request referred to [above] or within such other period as may be agreed upon by the Parties, either Party may submit the dispute to arbitration on giving written notice of its intention to the other Party. 3. Arbitration shall be by a tribunal ..." (Article 16).

Asia and the Middle East

1995 *Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin:*

The functions of the Council of the Mekong River Commission include: "To entertain, address and resolve issues, differences and disputes referred to it by any Council member, the Joint Committee, or any member State on matters arising under this Agreement" (Article 18 C).

Chapter 5: "Whenever any difference or dispute may arise....regarding any matters covered by this agreement and/or actions taken by the implementing organisation through its various bodies, particularly as to the interpretations of this Agreement and the legal rights of the parties, the Commission shall first make every effort to resolve the issue as provided in Articles 18.C and 24.F" (Article 34)..."In the event the Commission is unable to resolve the difference or dispute within a timely manner, the issue shall be referred to the Governments to take cognizance of the matter for resolution by negotiation through diplomatic channels within a timely manner, and may communicate their decision to the Council for further proceedings as may be necessary to carry out such decision. Should the Governments find it necessary or beneficial to facilitate the resolution of the matter, they may, by mutual agreement, request the assistance of mediation through an entity or party mutually agreed upon, and thereafter to proceed according to the principles of international law." (Article 35).

1996 *Treaty between Bangladesh and India on Sharing of the Ganga/Ganges Waters at Farakka*:

"Any difference or dispute...if not resolved by the Joint Committee, shall be referred to the Indo-Bangladesh Joint Rivers Commission. If the difference or dispute still remains unresolved, it shall be referred to the two Governments which shall meet urgently at the appropriate level to resolve it by mutual discussion." (Article VII).

1995 *Agreement between China and Mongolia on the Protection and Utilization of Transboundary Waters:*

"The Two Contracting Parties shall resolve the problems in the implementation of this Agreement through friendly consultation." (Article 14)

1994 *Treaty of Peace between Israel and Jordan:*

"They will develop good neighbourly relations of co-operation between them to ensure lasting security, will refrain from the threat or use of force against each other and will settle all disputes between them by peaceful means." (Article 2)

"Any question as to the implementation of this Article will be dealt with through a mechanism of consultations which will include a liaison system verification, supervision, and where necessary, other mechanisms and higher level consultation. The details of the mechanism of consultations will be contained in an agreement..." (Article 3).

Europe

1966 *Agreement regulating the withdrawal of water from Lake Constance*:

"Where, in the course of an expression of views pursuant to article 7 [concerning withdrawals of water], objections are raised under the provisions of article 3, the case shall be submitted to a consultative committee for consideration at the technical level with a view to preparing the way for an agreement." (Article 8).
"Where the riparian States are unable to reach agreement through discussions in the consultative committee...agreement shall be sought through the diplomatic channel. If no agreement is reached through the diplomatic channel, any interested riparian State may require that the case should be submitted to an arbitration commission." (Article 9)

Article 10 sets out the constitution of the arbitration commission, and Articles 11 and 12 set out the procedure of the arbitration commission: It "shall endeavour, at every stage of the proceedings, to bring about an amicable settlement of the case. If it does not prove possible to achieve such a settlement, the commission shall adopt a decision by majority vote. The said decision shall be final and binding upon all the riparian States."

1987 ***Agreement on co-operation and management of water resources in the Danube Basin:***

A Standing Committee on Management of Water Resources shall "contribute to the solution of questions arising from the application of this Agreement through joint consultations." (Article 7). "Disputes...shall be settled by diplomatic means. Where a dispute cannot be settled in this way, it shall be submitted to an arbitral tribunal at the request of either of the Contracting Parties." (Article 9).

1994 ***Convention on Cooperation for the Protection and Sustainable Development of the Danube River (Danube River Protection Convention)*****:**

"If a dispute arises...they shall seek a solution by negotiation or by any other means of dispute settlement acceptable to the parties to the dispute, if appropriate with assistance by the International Commission..If the parties...are not able to settle the dispute in accordance with paragraph 1...within a reasonable time but not more than 12 months after the International Commission has been notified about the dispute....the dispute shall be submitted for compulsory decision to one of the following means of peaceful settlement:
- the International Court of Justice;
- arbitration in accordance with Annex V.." (Article 24).

1976 ***Convention concerning the protection of the Rhine against Chemical Pollution:***

"Any dispute...which cannot be settled by negotiation shall be submitted to arbitration unless the parties to the dispute decide otherwise and at the request of one of them, in accordance with the provisions of Annex B which shall form an integral part of this Convention." (Article 15).

1992 ***Convention for the Protection of the Marine Environment of the North-East Atlantic:***

"Any disputes..., which cannot be settled otherwise by the Contracting Parties concerned, for instance by means of inquiry or conciliation within the Commission, shall at the request of any of those Contracting Parties, be submitted to arbitration under the conditions laid down in this Article." (Article 32).